

Please type a plus sign (+) inside this box → +

PTO/SB/05 (05-03)

Approved for use through 10/31/2002. OMB 0651-0032
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

UTILITY PATENT APPLICATION TRANSMITTAL	Attorney Docket No. 4041J-000739	
	First Inventor	Hirotsugu TAKEUCHI et al
	Title	Ejector Cycle
	Express Mail Label No. EL 623 486 644 US	

(Only for new nonprovisional applications under 37 C.F.R. 1.53(b))

APPLICATION ELEMENTS <i>See MPEP chapter 600 concerning utility patent application contents.</i>	ADDRESS TO: Mail Stop Patent Application Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450
------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------

<p>1. <input checked="" type="checkbox"/> Fee Transmittal Form (e.g., PTO/SB/17) <i>(Submit an original and a duplicate for fee processing)</i></p> <p>2. <input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27.</p> <p>3. <input checked="" type="checkbox"/> Specification [Total Pages 38] <i>(preferred arrangement set forth below)</i></p> <ul style="list-style-type: none">- Descriptive title of the invention <input checked="" type="checkbox"/> Specification filed in English- Cross References to Related Applications- Statement Regarding Fed sponsored R & D- Reference to sequence listing, a table, or a computer program listing appendix- Background of the Invention- Brief Summary of the Invention- Brief Description of the Drawings (if filed)- Detailed Description- Claim(s)- Abstract of the Disclosure <p>4. <input checked="" type="checkbox"/> Drawing(s) (35 U.S.C.113) [Total Sheets 22]</p> <p>5. Oath or Declaration [Total Pages 4]</p> <p style="margin-left: 20px;">a. <input checked="" type="checkbox"/> Newly executed (original or copy)</p> <p style="margin-left: 20px;">b. <input type="checkbox"/> Copy from a prior application (37 CFR 1.63 (d)) <i>(for a continuation/divisional with Box 18 completed)</i></p> <p style="margin-left: 20px;">i. <input type="checkbox"/> DELETION OF INVENTOR(S) Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).</p> <p>6. <input checked="" type="checkbox"/> Application Data Sheet. See 37 CFR 1.76</p>	<p>7. <input type="checkbox"/> CD-ROM or CD-R in duplicate, large table or Computer Program <i>(Appendix)</i></p> <p>8. Nucleotide and/or Amino Acid Sequence Submission <i>(if applicable, all necessary)</i></p> <p style="margin-left: 20px;">a. <input type="checkbox"/> Computer Readable Form (CRF)</p> <p style="margin-left: 20px;">b. Specification Sequence Listing on:</p> <p style="margin-left: 40px;">i. <input type="checkbox"/> CD-ROM or CD-R (2 copies); or</p> <p style="margin-left: 40px;">ii. <input type="checkbox"/> paper</p> <p style="margin-left: 20px;">c. <input type="checkbox"/> Statements verifying identity of above copies</p> <p style="text-align: center;">ACCOMPANYING APPLICATIONS PARTS</p> <p>9. <input checked="" type="checkbox"/> Assignment Papers (cover sheet & document(s))</p> <p>10. <input type="checkbox"/> 37 C.F.R. §3.73(b) Statement <input type="checkbox"/> Power of Attorney <i>(when there is an assignee)</i></p> <p>11. <input type="checkbox"/> English Translation Document <i>(if applicable)</i></p> <p>12. <input checked="" type="checkbox"/> Information Disclosure Statement (IDS)/PTO-1449 <input checked="" type="checkbox"/> Copies of IDS Citations</p> <p>13. <input type="checkbox"/> Preliminary Amendment</p> <p>14. <input checked="" type="checkbox"/> Return Receipt Postcard (MPEP 503) <i>(Should be specifically itemized)</i></p> <p>15. <input checked="" type="checkbox"/> Certified Copy of Priority Document(s) <i>(if foreign priority is claimed)</i></p> <p>16. <input type="checkbox"/> Request and Non Publication under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.</p> <p>17. <input type="checkbox"/> Other: _____</p>
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

18. If a **CONTINUING APPLICATION**, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:


☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP)

of prior application No: _____ / _____

Prior application information: Examiner _____

Group / Art Unit: _____

For CONTINUATION or DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

17. CORRESPONDENCE ADDRESS						
<input checked="" type="checkbox"/> Customer Number or Bar Code Label		 27572 <i>(Insert Customer No. or Attach bar code label here)</i>			or <input type="checkbox"/> Correspondence address below	
Name	Harness, Dickey & Pierce, P.L.C.					
Address	P.O. Box 828					
City	Bloomfield Hills	State	MI	Zip Code	48303	
Country	United States of America	Telephone	248-641-1600	Fax	248-641-0270	

Name (Print/Type)	Michael J. Schmidt, Esq.	Registration No. (Attorney/Agent)	34,007
Signature			Date July 7, 2003

15535 U.S. PTO
10/6/03
07/07/03

<h2 style="margin: 0;">FEE TRANSMITTAL</h2> <h3 style="margin: 0;">for FY 2003</h3> <p style="font-size: small; margin: 5px 0;">Patent fees are subject to annual revision.</p> <p><input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27</p>	<p style="text-align: center; font-weight: bold; font-size: small;">Complete if Known</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Application Number</td> <td>unassigned yet</td> </tr> <tr> <td>Filing Date</td> <td>July 7, 2003</td> </tr> <tr> <td>First Named Inventor</td> <td>Hirotsugu TAKEUCHI et al</td> </tr> <tr> <td>Examiner Name</td> <td></td> </tr> <tr> <td>Group / Art Unit</td> <td></td> </tr> <tr> <td>Attorney Docket No.</td> <td>4041J-000739</td> </tr> </table>	Application Number	unassigned yet	Filing Date	July 7, 2003	First Named Inventor	Hirotsugu TAKEUCHI et al	Examiner Name		Group / Art Unit		Attorney Docket No.	4041J-000739
Application Number	unassigned yet												
Filing Date	July 7, 2003												
First Named Inventor	Hirotsugu TAKEUCHI et al												
Examiner Name													
Group / Art Unit													
Attorney Docket No.	4041J-000739												
TOTAL AMOUNT OF PAYMENT (\$) 790													

<p>METHOD OF PAYMENT (check all that apply)</p> <p> <input checked="" type="checkbox"/> Check <input type="checkbox"/> Credit card <input type="checkbox"/> Money Order <input type="checkbox"/> Other <input type="checkbox"/> None </p> <p><input type="checkbox"/> Deposit Account:</p> <p> Deposit Account Number: 08-0750 Deposit Account Name: Harness, Dickey & Pierce, P.L.C. </p> <p>The Commissioner is authorized to: (check all that apply)</p> <p> <input type="checkbox"/> Charge fee(s) indicated below <input checked="" type="checkbox"/> Credit any overpayments <input checked="" type="checkbox"/> Charge any additional fee(s) during the pendency of this application <input type="checkbox"/> Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account. </p>	<p>3. ADDITIONAL FEES</p> <table border="1" style="width: 100%; border-collapse: collapse; font-size: x-small;"> <thead> <tr> <th colspan="2">Large Entity</th> <th colspan="2">Small Entity</th> <th rowspan="2">Fee Description</th> <th rowspan="2">Fee Paid</th> </tr> <tr> <th>Fee Code</th> <th>Fee (\$)</th> <th>Fee Code</th> <th>Fee (\$)</th> </tr> </thead> <tbody> <tr><td>1051</td><td>130</td><td>2051</td><td>65</td><td>Surcharge - late filing fee or oath</td><td></td></tr> <tr><td>1052</td><td>50</td><td>2052</td><td>25</td><td>Surcharge - late provisional filing fee or cover sheet.</td><td></td></tr> <tr><td>1053</td><td>130</td><td>1053</td><td>130</td><td>Non-English specification</td><td></td></tr> <tr><td>1812</td><td>2,520</td><td>1812</td><td>2,520</td><td>For filing a request for reexamination</td><td></td></tr> <tr><td>1804</td><td>920*</td><td>1804</td><td>920*</td><td>Requesting publication of SIR prior to Examiner action</td><td></td></tr> <tr><td>1805</td><td>1,840*</td><td>1805</td><td>1,840*</td><td>Requesting publication of SIR after Examiner action</td><td></td></tr> <tr><td>1251</td><td>110</td><td>2251</td><td>55</td><td>Extension for reply within first month</td><td></td></tr> <tr><td>1252</td><td>410</td><td>2252</td><td>205</td><td>Extension for reply within second month</td><td></td></tr> <tr><td>1253</td><td>930</td><td>2253</td><td>465</td><td>Extension for reply within third month</td><td></td></tr> <tr><td>1254</td><td>1,450</td><td>2254</td><td>725</td><td>Extension for reply within fourth month</td><td></td></tr> <tr><td>1255</td><td>1,970</td><td>2255</td><td>985</td><td>Extension for reply within fifth month</td><td></td></tr> <tr><td>1401</td><td>320</td><td>2401</td><td>160</td><td>Notice of Appeal</td><td></td></tr> <tr><td>1402</td><td>320</td><td>2402</td><td>160</td><td>Filing a brief in support of an appeal</td><td></td></tr> <tr><td>1403</td><td>280</td><td>2403</td><td>140</td><td>Request for oral hearing</td><td></td></tr> <tr><td>1451</td><td>1,510</td><td>1451</td><td>1,510</td><td>Petition to institute a public use proceeding</td><td></td></tr> <tr><td>1452</td><td>110</td><td>2452</td><td>55</td><td>Petition to revive - unavoidable</td><td></td></tr> <tr><td>1453</td><td>1,300</td><td>2453</td><td>650</td><td>Petition to revive - unintentional</td><td></td></tr> <tr><td>1501</td><td>1,300</td><td>2501</td><td>650</td><td>Utility issue fee (or reissue)</td><td></td></tr> <tr><td>1502</td><td>470</td><td>2502</td><td>235</td><td>Design issue fee</td><td></td></tr> <tr><td>1503</td><td>630</td><td>2503</td><td>315</td><td>Plant issue fee</td><td></td></tr> <tr><td>1460</td><td>130</td><td>1460</td><td>130</td><td>Petitions to the Commissioner</td><td></td></tr> <tr><td>1807</td><td>50</td><td>1807</td><td>50</td><td>Processing fee under 37 CFR 1.17 (q)</td><td></td></tr> <tr><td>1806</td><td>180</td><td>1806</td><td>180</td><td>Submission of Information Disclosure Stmt</td><td></td></tr> <tr><td>8021</td><td>40</td><td>8021</td><td>40</td><td>Recording each patent assignment per property (times number of properties)</td><td>40</td></tr> <tr><td>1809</td><td>750</td><td>2809</td><td>375</td><td>Filing a submission after final rejection (37 CFR § 1.129(a))</td><td></td></tr> <tr><td>1810</td><td>750</td><td>2810</td><td>375</td><td>For each additional invention to be examined (37 CFR § 1.129(b))</td><td></td></tr> <tr><td>1801</td><td>750</td><td>2801</td><td>375</td><td>Request for Continued Examination (RCE)</td><td></td></tr> <tr><td>1802</td><td>900</td><td>1802</td><td>900</td><td>Request for expedited examination of a design application</td><td></td></tr> </tbody> </table> <p>Other fee (specify) _____</p> <p>*Reduced by Basic Filing Fee Paid SUBTOTAL (3) (\$) 40</p>	Large Entity		Small Entity		Fee Description	Fee Paid	Fee Code	Fee (\$)	Fee Code	Fee (\$)	1051	130	2051	65	Surcharge - late filing fee or oath		1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet.		1053	130	1053	130	Non-English specification		1812	2,520	1812	2,520	For filing a request for reexamination		1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action		1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action		1251	110	2251	55	Extension for reply within first month		1252	410	2252	205	Extension for reply within second month		1253	930	2253	465	Extension for reply within third month		1254	1,450	2254	725	Extension for reply within fourth month		1255	1,970	2255	985	Extension for reply within fifth month		1401	320	2401	160	Notice of Appeal		1402	320	2402	160	Filing a brief in support of an appeal		1403	280	2403	140	Request for oral hearing		1451	1,510	1451	1,510	Petition to institute a public use proceeding		1452	110	2452	55	Petition to revive - unavoidable		1453	1,300	2453	650	Petition to revive - unintentional		1501	1,300	2501	650	Utility issue fee (or reissue)		1502	470	2502	235	Design issue fee		1503	630	2503	315	Plant issue fee		1460	130	1460	130	Petitions to the Commissioner		1807	50	1807	50	Processing fee under 37 CFR 1.17 (q)		1806	180	1806	180	Submission of Information Disclosure Stmt		8021	40	8021	40	Recording each patent assignment per property (times number of properties)	40	1809	750	2809	375	Filing a submission after final rejection (37 CFR § 1.129(a))		1810	750	2810	375	For each additional invention to be examined (37 CFR § 1.129(b))		1801	750	2801	375	Request for Continued Examination (RCE)		1802	900	1802	900	Request for expedited examination of a design application	
Large Entity		Small Entity		Fee Description	Fee Paid																																																																																																																																																																														
Fee Code	Fee (\$)	Fee Code	Fee (\$)																																																																																																																																																																																
1051	130	2051	65	Surcharge - late filing fee or oath																																																																																																																																																																															
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet.																																																																																																																																																																															
1053	130	1053	130	Non-English specification																																																																																																																																																																															
1812	2,520	1812	2,520	For filing a request for reexamination																																																																																																																																																																															
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action																																																																																																																																																																															
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action																																																																																																																																																																															
1251	110	2251	55	Extension for reply within first month																																																																																																																																																																															
1252	410	2252	205	Extension for reply within second month																																																																																																																																																																															
1253	930	2253	465	Extension for reply within third month																																																																																																																																																																															
1254	1,450	2254	725	Extension for reply within fourth month																																																																																																																																																																															
1255	1,970	2255	985	Extension for reply within fifth month																																																																																																																																																																															
1401	320	2401	160	Notice of Appeal																																																																																																																																																																															
1402	320	2402	160	Filing a brief in support of an appeal																																																																																																																																																																															
1403	280	2403	140	Request for oral hearing																																																																																																																																																																															
1451	1,510	1451	1,510	Petition to institute a public use proceeding																																																																																																																																																																															
1452	110	2452	55	Petition to revive - unavoidable																																																																																																																																																																															
1453	1,300	2453	650	Petition to revive - unintentional																																																																																																																																																																															
1501	1,300	2501	650	Utility issue fee (or reissue)																																																																																																																																																																															
1502	470	2502	235	Design issue fee																																																																																																																																																																															
1503	630	2503	315	Plant issue fee																																																																																																																																																																															
1460	130	1460	130	Petitions to the Commissioner																																																																																																																																																																															
1807	50	1807	50	Processing fee under 37 CFR 1.17 (q)																																																																																																																																																																															
1806	180	1806	180	Submission of Information Disclosure Stmt																																																																																																																																																																															
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	40																																																																																																																																																																														
1809	750	2809	375	Filing a submission after final rejection (37 CFR § 1.129(a))																																																																																																																																																																															
1810	750	2810	375	For each additional invention to be examined (37 CFR § 1.129(b))																																																																																																																																																																															
1801	750	2801	375	Request for Continued Examination (RCE)																																																																																																																																																																															
1802	900	1802	900	Request for expedited examination of a design application																																																																																																																																																																															

1. BASIC FILING FEE																																																																																																												
<table border="1" style="width: 100%; border-collapse: collapse; font-size: x-small;"> <thead> <tr> <th colspan="2">Large Entity</th> <th colspan="2">Small Entity</th> <th rowspan="2">Fee Description</th> <th rowspan="2">Fee Paid</th> </tr> <tr> <th>Fee Code</th> <th>Fee (\$)</th> <th>Fee Code</th> <th>Fee (\$)</th> </tr> </thead> <tbody> <tr><td>1001</td><td>750</td><td>2001</td><td>375</td><td>Utility filing fee</td><td>750</td></tr> <tr><td>1002</td><td>330</td><td>2002</td><td>165</td><td>Design filing fee</td><td></td></tr> <tr><td>1003</td><td>520</td><td>2003</td><td>260</td><td>Plant filing fee</td><td></td></tr> <tr><td>1004</td><td>750</td><td>2004</td><td>375</td><td>Reissue filing fee</td><td></td></tr> <tr><td>1005</td><td>160</td><td>2005</td><td>80</td><td>Provisional filing fee</td><td></td></tr> </tbody> </table> <p style="text-align: right;">SUBTOTAL (1) (\$) 750</p>	Large Entity		Small Entity		Fee Description	Fee Paid	Fee Code	Fee (\$)	Fee Code	Fee (\$)	1001	750	2001	375	Utility filing fee	750	1002	330	2002	165	Design filing fee		1003	520	2003	260	Plant filing fee		1004	750	2004	375	Reissue filing fee		1005	160	2005	80	Provisional filing fee		<p>2. EXTRA CLAIM FEES</p> <table style="width: 100%; font-size: x-small;"> <tr> <td>Total Claims</td> <td>17</td> <td>-20 **</td> <td>=</td> <td>0</td> <td>X</td> <td>Fee from below</td> <td>=</td> <td>0</td> </tr> <tr> <td>Independent Claims</td> <td>2</td> <td>-3 **</td> <td>=</td> <td>0</td> <td>X</td> <td></td> <td>=</td> <td>0</td> </tr> <tr> <td>Multiple Dependent</td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td>=</td> <td>0</td> </tr> </table> <table border="1" style="width: 100%; border-collapse: collapse; font-size: x-small;"> <thead> <tr> <th colspan="2">Large Entity</th> <th colspan="2">Small Entity</th> <th rowspan="2">Fee Description</th> <th rowspan="2">Fee Paid</th> </tr> <tr> <th>Fee Code</th> <th>Fee (\$)</th> <th>Fee Code</th> <th>Fee (\$)</th> </tr> </thead> <tbody> <tr><td>1202</td><td>18</td><td>2202</td><td>9</td><td>Claims in excess of 20</td><td></td></tr> <tr><td>1201</td><td>84</td><td>2201</td><td>42</td><td>Independent claims in excess of 3</td><td></td></tr> <tr><td>1203</td><td>280</td><td>2203</td><td>140</td><td>Multiple dependent claim, if not paid</td><td></td></tr> <tr><td>1204</td><td>84</td><td>2204</td><td>42</td><td>** Reissue independent claims over original patent</td><td></td></tr> <tr><td>1205</td><td>18</td><td>2205</td><td>9</td><td>** Reissue claims in excess of 20 and over original patent</td><td></td></tr> </tbody> </table> <p style="text-align: right;">SUBTOTAL (2) (\$) 0</p>	Total Claims	17	-20 **	=	0	X	Fee from below	=	0	Independent Claims	2	-3 **	=	0	X		=	0	Multiple Dependent					X		=	0	Large Entity		Small Entity		Fee Description	Fee Paid	Fee Code	Fee (\$)	Fee Code	Fee (\$)	1202	18	2202	9	Claims in excess of 20		1201	84	2201	42	Independent claims in excess of 3		1203	280	2203	140	Multiple dependent claim, if not paid		1204	84	2204	42	** Reissue independent claims over original patent		1205	18	2205	9	** Reissue claims in excess of 20 and over original patent	
Large Entity		Small Entity		Fee Description			Fee Paid																																																																																																					
Fee Code	Fee (\$)	Fee Code	Fee (\$)																																																																																																									
1001	750	2001	375	Utility filing fee	750																																																																																																							
1002	330	2002	165	Design filing fee																																																																																																								
1003	520	2003	260	Plant filing fee																																																																																																								
1004	750	2004	375	Reissue filing fee																																																																																																								
1005	160	2005	80	Provisional filing fee																																																																																																								
Total Claims	17	-20 **	=	0	X	Fee from below	=	0																																																																																																				
Independent Claims	2	-3 **	=	0	X		=	0																																																																																																				
Multiple Dependent					X		=	0																																																																																																				
Large Entity		Small Entity		Fee Description	Fee Paid																																																																																																							
Fee Code	Fee (\$)	Fee Code	Fee (\$)																																																																																																									
1202	18	2202	9	Claims in excess of 20																																																																																																								
1201	84	2201	42	Independent claims in excess of 3																																																																																																								
1203	280	2203	140	Multiple dependent claim, if not paid																																																																																																								
1204	84	2204	42	** Reissue independent claims over original patent																																																																																																								
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent																																																																																																								

**or number previously paid, if greater; For Reissues, see above

SUBMITTED BY		Complete (if applicable)	
Name (Print/Type)	Michael J. Schmidt	Registration No. Attorney/Agent)	34,007
Signature		Telephone	248-641-1600
		Date	July 7, 2003

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.